

## ABSTRACT:

*Chlorella* extracts containing high molecular weight *Chlorella* polysaccharide and polysaccharide complexes show immune modulatory, specifically immune stimulatory, activity.

5 The polysaccharide and polysaccharide complexes contain glucose and any combination of: galactose, rhamnose, mannose and arabinose, as well as N-acetyl glucosamine and N-acetyl galactosamine. The extracts may be treated with pronase, DNase, RNase and proteases to remove unassociated nucleic  
10 acids, ribonucleic acids and proteins. The extracts may also undergo treatment to effect cleavage of specific glycosidic linkages, the linkages being defined by their susceptibility to cleavage by amylase, amyloglucosidase, cellulase or neuraminidase. *Chlorella* extracts may be administered to a  
15 mammal to increase proliferation of splenocytes and increase production of cytokines such as IL-6, IL-10, INF- $\gamma$  and TNF- $\alpha$ . They may be used as a supplement to a vaccination regimen.